

NOTES ON THE COURTSHIP AND MATING OF THE  
FLY, *PTECTICUS TRIVITTATUS* SAY<sup>1</sup>

BY PHIL RAU

Kirkwood, Missouri

During several summers before these notes were made in 1930 and also several summers afterwards, large numbers of these attractive greenish-colored flies were seen hovering in courtship dances above garbage heaps on the rear of a lot. They were first observed on the 20th day of May of that year and they continued their activities over this restricted area until the middle of July; to be exact, they appeared in much reduced numbers on July 19th and had completely disappeared by July 25th. There are probably two generations a year, for they again appeared on August 22nd and were seen thereafter until September 11th.

They spend much of their time flying slowly and noiselessly over this "island" of color and odor commencing sometimes as early as 5:30 in the morning when only a few may be seen; they increase in numbers with the passing of the hours and the rising of the temperature. They dance almost incessantly throughout the long day, and even into the dusk may the motion of their frail forms be seen. To say that they dance incessantly is not wholly true for individuals often leave the throng to rest on a tin-can or bottle or cantaloupe skin. The temperature readings when these dances occur varies from 65 to 75 degrees F.; one can, however, hardly refer to the phenomenon as a "sun dance" because the flies are equally active in sunshine or shade, as well as in shadowy stretches splashed with spots of sunlight. Both males and females are present in the dance, and the sexes are about equal.

It is, indeed, a pretty sight to see a flock of these flies moving in a horizontal plane in more-or-less irregular circles

<sup>1</sup>Specimens were kindly identified by Mr. C. T. Greens of U. S. Dept. of Agriculture.

and in figure eights just an inch or two above the mass of multi-colored refuse. As one singles out certain individuals, however, one soon realizes that frequently they describe circles within still larger circles. Each fly circles about horizontally in an area of ten or twelve inches with occasional breaks by an insect into another's circle; all this gives the assemblage a placid and slow-moving appearance. Often a fly will leave the dance to rest on a tin-can or on a glass bottle, many of which stud the heap. Sometimes one will go in pursuit of another and quarreling occurs. When the quarrel culminates mating usually takes place. Mating is consummated while they are on the wing but the pair soon settle down amid the garbage to rest, remaining in copulo for 10 or 15 minutes. So intent are they in this affair that the object upon which they repose may be carried for a long distance without arousing them.

When one examines a mated pair closely one finds that the larger insect, the female, is invariably on top of the smaller one, the male. Both heads are close together and during the process the female caresses the face and eyes of the male with her front legs. This behavior is very much like that of a fond mother petting her child. It is quite evident that the male enjoys this procedure, for he responds by licking her leg with his proboscis. Often his mouth parts will actually reach out to meet her leg, but sometimes he holds them alert in attentive readiness. One pair behaved this way for 15 minutes while I held the bottle upon which they rested in my hand.

The flies, singly or *in copula*, never rest on the moist portions of the garbage but always upon some hard dry object in the mass. Sometimes they rest on the grass-stems near their stamping grounds. They have never been seen to feed on garbage and I have never seen them lay eggs there, although I have watched carefully to detect both activities. However, oviposition must occur on objects nearby and also very soon after mating, for on one occasion when a mated pair separated in my hand, the female deposited about a hundred eggs in less than ten minutes.